IN THE CLAIMS:

Claim 1 (currently amended): Composite material (10) [[of]] comprising:

a substrate (1) that is at least one of flammable and heat sensitive; and ~~with, applied to at least one side, a titanium oxide layer (2) with a chemical, physical, mechanical, catalytic and/or optical function, characterized in that~~

a flame protection coating (2) on the substrate;

the flame protection coating comprising:

~~on the substrate (1) is deposited a titanium oxide layer (2) of~~

a base layer (3) of TiO_x applied on the substrate (1) where $1.5 \leq x \leq 1.9$;

~~with an oxygen content of $0.7 \leq x < 2$ or of $TiO_x(OH)_y$ with an oxygen content of $0.5 \leq x < 2$ and a hydroxide content of $0 \leq y < 0.7$ and on this base layer (3) is applied~~

a top layer (4) of at least one of amorphous and [[/or]] crystalline TiO_2 formed on the TiO_x base layer (3); and

wherein a total thickness of the flame protection coating (2) is 10 – 300 nm and wherein the TiO_2 top layer (4) has a thickness of 10 – 50% of the total thickness of the flame protection coating.

Claims 2-3 (canceled).

Claim 4 (currently amended): Composite material (10) according to claim 1, characterized in that between the substrate (1) and the base layer (3) of the titanium oxide layer (2) is deposited a protective layer (7) of at least one of the metal oxides of the group comprising ZnO, MgO, ZrO_2, In_2O_3, Sb_2O_3, Al_2O_3 and SiO_2 ~~, and/or a polar adhesion layer,~~

~~preferably with maximum the same layer thickness as the titanium oxide layer (2).~~

Claim 5 (currently amended): Composite material (10) according to claim 1, characterized in that the base layer (3) of TiO_x is mixed with at least one metal oxide from the group comprising MgO, ZnO, ZrO_2, In_2O_3, Sb_2O_3, Al_2O_3 and [[/or]] SiO_2, ~~and/or is doped with at least one metal oxide of the group comprising Fe_2O_3, WO_3, MnO_2, NiO, BaO and/or CaO;~~ where the total proportion of all metal oxides remains below 50 w. % ~~and the total proportion of the metal oxides of the second group remains below 7 w. %~~.

Claim 6 (currently amended): Composite material (10) according to claim 1, characterized in that between the base layer (3) and the top layer (4) of the titanium oxide layer (2) is deposited an electrically conductive intermediate layer (5) which ~~preferably~~ comprises TiO_x with an oxygen content of $0.7 \leq x \leq 1.5$.

Claim 7 (previously presented): Composite material (10) according to claim 1, characterized in that at least the nine top atomic layers of the top layer (4) of the titanium oxide layer (2) mainly comprise the TiO_2 modification anatase.

Claim 8 (currently amended): Composite material (10) according to claim 1, [[with]] wherein the substrate is a plastic substrate (1) ~~according to claim 1~~, characterized in that ~~preferably~~ mixed with the plastic substrate (1), are finely dispersed, [[are]] sub-micron filler particles (6) of a metal oxide or a metal hydroxide which dehydrates under heat.

Claims 9-11 (canceled).

Claim 12 (currently amended): Composite material (10) according to claim 1, wherein the ~~Process according to claim 11, characterized in that a~~ top layer (4) is deposited of TiO_2 doped with at least one metal oxide from the group comprising ~~preferably of the group comprising~~ Fe_2O_3, WO_3, MnO_2, NiO, BaO and CaO, where in total less than 7 w. % doping is added.

Claims 13-14 (canceled).

Claim 15 (new): Composite material (10) according to claim 1, wherein, between the substrate (1) and the base layer (3) of the titanium oxide layer (2) is deposited a protective layer (7) of a polar adhesion.

Claim 16 (new): Composite material (10) according to claim 1, wherein the base layer (3) of TiO_x is doped with at least one metal oxide of the group comprising Fe_2O_3, WO_3, MnO_2, NiO, BaO and CaO, where the total proportion of all metal oxides remains below 7 w. %.

Claim 17 (new): Composite material (10) according to claim 1, wherein the substrate (1) comprises at least one of a polymer material and a textile material.

Claim 18 (new): Composite material (10) according to claim 17, wherein the

substrate (1) has opposite sides and includes said coating on both of the opposite sides.

Claim 19 (new): Composite material (10) comprising:

a substrate (1) that is at least one of flammable and heat sensitive; and

a flame protection coating (2) on the substrate;

the flame protection coating comprising:

a base layer (3) of $TiO_x(OH)_y$ applied on the substrate (1), where $1.5 \leq x < 1.9$ and a $0.2 \leq y < 0.7$;

a top layer (4) of at least one of amorphous and crystalline TiO_2 formed on the base layer (3); and

wherein a total thickness of the flame protection coating (2) is 10 – 300 nm and wherein the TiO_2 top layer (4) has a thickness of 10 – 50% of the total thickness of the flame protection coating.

Claim 20 (new): Composite material (10) according to claim 19, characterized in that between the substrate (1) and the base layer (3) is deposited a protective layer (7) of at least one of the metal oxides of the group comprising ZnO, MgO, ZrO_2, In_2O_3, Sb_2O_3, Al_2O_3 and SiO_2.

Claim 21 (new): Composite material (10) according to claim 19, characterized in that the base layer (3) is mixed with at least one metal oxide from the group comprising MgO, ZnO, ZrO_2, In_2O_3, Sb_2O_3, Al_2O_3 and SiO_2, where the total proportion of all metal oxides remains below 50 w. %.

Claim 22 (new): Composite material (10) according to claim 19, characterized in that between the base layer (3) and the top layer (4) is deposited an electrically conductive intermediate layer (5) which comprises TiO_x with an oxygen content of $0.7 \leq x \leq 1.5$.

Claim 23 (new): Composite material (10) according to claim 19, characterized in that at least the nine top atomic layers of the top layer (4) mainly comprise the TiO_2 modification anatase.

Claim 24 (new): Composite material (10) according to claim 19, wherein the substrate is a plastic substrate (1) mixed with are finely dispersed, sub-micron filler particles (6) of a metal oxide or a metal hydroxide which dehydrates under heat.

Claim 25 (new): Composite material (10) according to claim 19, wherein the top layer (4) is deposited of TiO_2 doped with at least one metal oxide from the group comprising Fe_2O_3, WO_3, MnO_2, NiO, BaO and CaO, where in total less than 7 w. % doping is added.

Claim 26 (new): Composite material (10) according to claim 19, wherein, between the substrate (1) and the base layer (3) of the titanium oxide layer (2) is deposited a protective layer (7) of a polar adhesion.

Claim 27 (new): Composite material (10) according to claim 19, wherein the base layer (3) is doped with at least one metal oxide of the group comprising Fe_2O_3, WO_3, MnO_2,

NiO, BaO and CaO, where the total proportion of all metal oxides remains below 7 w. %.

Claim 28 (new): Composite material (10) according to claim 19, wherein the substrate (1) comprises at least one of a polymer material and a textile material.

Claim 29 (new): Composite material (10) according to claim 28, wherein the substrate (1) has opposite sides and includes said coating on both of the opposite sides.